

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the arguments set forth fully below. Claims 1-69 were previously pending in this Application. Within the Office Action, Claims 1-69 have been rejected. By the above amendment, Claims 7, 21, 23 and 62 have been amended. Accordingly, Claims 1-69 are now pending in the application.

Objections To The Drawings

Within the Office Action, the drawings have been objected to because Figure 3 is not labeled. The Applicant is confused by this objection and is not sure what labeling should be added to Figure 3. During review of this application, Applicant realized that Figure 2 should include a PRIOR ART designation. By the above amendment, Figure 2 has been amended to include the PRIOR ART designation.

Objections To The Specification

Within the Office Action, the specification has been objected to. Specifically, it is stated within the Office Action that the title of the invention is not descriptive. By the above amendment, the title has been amended to be more descriptive. The title has been amended to read **REAL-TIME TRANSPORT PROTOCOL FOR TRANSPORTING ISOCHRONOUS DATA PACKETS OVER A NON-ISOCHRONOUS COMPLIANT NETWORK**.

Objections To The Claims

Within the Office Action, Claim 23 has been objected to as being of improper dependent form. By the above amendment, Claim 23 has been amended to be dependent on Claim 22.

Rejections Under 35 U.S.C. § 112

Within the Office Action, Claims 7, 21 and 62 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it is stated that within the Claims 7, 21 and 62, there is insufficient antecedent basis for the term “the cycle master.” By the above amendments, Claims 7, 21 and 62 have been amended to provide sufficient antecedent basis for this term.

Rejections Under 35 U.S.C. § 102

Within the Office Action, Claims 1-11, 13-25, 27-35, 37-50, 52-65 and 67-69 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 20010003526 to Kanehara (hereinafter “Kanehara”). The Applicant respectfully disagrees.

Kanehara teaches a packet processing apparatus and method. Kanehara teaches a method for changing an IP communication to be sent by asynchronous over to an IP communication to be sent by isochronous transfer in accordance with a traffic state in data transfer on the IEEE 1394 serial bus. [Kanehara, ¶ 0032] Kanehara teaches that when traffic on a LAN is large, change-over of the transfer system from the asynchronous transfer as the connectionless communication is performed in such a manner that data transfer is performed by isochronous transfer as the connection-oriented communication with the assured band. [Kanehara, ¶ 0033] Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. As described above, Kanehara teaches sending an IP communication *by isochronous* transfer.

In contrast to the teachings of Kanehara, the real-time transport protocol for transporting isochronous data packets over a non-isochronous compliant network of the present invention includes a payload format for transporting IEC 61883-1 CIP compliant IEEE 1394-2000 isochronous transport data. In some embodiments, the transport data includes a stream format, such as DV (Digital Video), AM824 (Audio/Music data format with an 8-bit header and 24 bits of audio), or MPEG, that has been packetized for isochronous transport by a source. The payload format is opaque to the transport mechanism. The isochronous transport clock is derived from the IEEE 1394-2000 cycle timer clock. In some embodiments, the real-time transport protocol is used to transport IEEE 1394-2000, IEC 61883 compliant data streams between IEEE 1394-2000 buses using IP (Internet Protocol), specifically, Ethernet/IP. Alternatively, other IP formats are used. Utilizing this real-time transport protocol, isochronous data packets are encapsulated to from a real-time transport protocol data packet which is sent over a non-isochronous compliant network. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer.

The independent Claim 1 is directed to a method of communicating data streams. The method of Claim 1 comprises packetizing one or more data streams into isochronous data packets, encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet and sending the real-time transport

protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer. For at least these reasons, the independent Claim 1 is allowable over the teachings of Kanehara.

Claims 2-11, 13 and 14 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Kanehara. Accordingly, Claims 2-11, 13 and 14 are all also allowable as being dependent on an allowable base claim.

The independent Claim 15 is directed to an apparatus for communicating data streams. The apparatus of Claim 15 comprises means for packetizing one or more data streams into isochronous data packets, means for encapsulating one or more isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet and means for sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer. For at least these reasons, the independent Claim 15 is allowable over the teachings of Kanehara.

Claims 16-25, 27 and 28 are all dependent on the independent Claim 15. As described above, the independent Claim 15 is allowable over the teachings of Kanehara. Accordingly, Claims 16-25, 27 and 28 are all also allowable as being dependent on an allowable base claim.

The independent Claim 29 is directed to an apparatus to communicate data streams. The apparatus of Claim 29 comprises a transmitting circuit configured to encapsulate one or more first isochronous data packets according to a real-time transport protocol, thereby forming a first real-time transport protocol data packet, and to transmit the first real-time transport protocol data packets over a non-isochronous compliant network and a receiving circuit configured to receive a second real-time transport protocol data packet from the non-isochronous compliant network, and to de-encapsulate the received second real-time transport protocol data packets into one or more second isochronous data packets. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer. For at least these reasons, the independent Claim 29 is allowable over the teachings of Kanehara.

Claims 30-35 and 37-42 are all dependent on the independent Claim 29. As described above, the independent Claim 29 is allowable over the teachings of Kanehara. Accordingly, Claims 30-35 and 37-42 are all also allowable as being dependent on an allowable base claim.

The independent Claim 43 is directed to a network of devices to communicate data streams. The network of devices of Claim 43 comprises a transmitting device configured to encapsulate one or more isochronous data packets according to a real-time transport protocol, thereby forming a real-time transport protocol data packet, and to transmit the real-time transport protocol data packets, a first isochronous compliant network coupled to the transmitting device, a receiving device configured to receive the real-time transport protocol data packets, a second isochronous compliant network coupled to the receiving device and a non-isochronous compliant network coupled to the first isochronous compliant network and the second isochronous compliant network to transmit the real-time transport protocol data packets from the transmitting device to the receiving device. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer. For at least these reasons, the independent Claim 43 is allowable over the teachings of Kanehara.

Claims 44-50 and 52-57 are all dependent on the independent Claim 43. As described above, the independent Claim 43 is allowable over the teachings of Kanehara. Accordingly, Claims 44-50 and 52-57 are all also allowable as being dependent on an allowable base claim.

The independent Claim 58 is directed to a method of communicating data streams. The method of Claim 58 comprises packetizing one or more data streams into IEEE 1394 compliant isochronous data packets, encapsulating one or more IEEE 1394 compliant isochronous data packets according to a real-time transport protocol to form a real-time transport protocol data packet and sending the real-time transport protocol data packets from a transmitting device to a receiving device over a non-isochronous compliant network. As described above, Kanehara does not teach encapsulating one or more isochronous data packets according to a real-time transport protocol and sending the packets *over a non-isochronous* compliant network. Kanehara teaches sending an IP communication *by isochronous* transfer. For at least these reasons, the independent Claim 58 is allowable over the teachings of Kanehara.

Claims 59-65 and 67-69 are all dependent on the independent Claim 58. As described above, the independent Claim 58 is allowable over the teachings of Kanehara. Accordingly, Claims 59-65 and 67-69 are all also allowable as being dependent on an allowable base claim.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 12, 26, 36, 51 and 66 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanehara in view of U.S. Patent No. 6,523,696 to Saito et al.

Claim 12 is dependent on the independent Claim 1. Claim 26 is dependent on the independent Claim 15. Claim 36 is dependent on the independent Claim 29. Claim 51 is dependent on the independent Claim 43. Claim 66 is dependent on the independent Claim 58. As described above, the independent Claims 1, 15, 29, 43 and 58 are all allowable over the teachings of Kanehara. Accordingly, Claims 12, 26, 36, 51 and 66 are all also allowable as being dependent on an allowable base claim.

For the reasons given above, the applicant respectfully submits that the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

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By: /Jonathan O. Owens/

Jonathan O. Owens
Reg. No. 37,902
Attorneys for Applicant(s)